C Sharp

The correct title of this article is C# (programming language). The substitution or omission of the # is due to technical restrictions.

C# is a multi-paradigm programming language encompassing strong typing, imperative, declarative, functional, generic, object-oriented (class-based), and component oriented programming disciplines. It was developed by Microsoft within its .Net initiative and later approved as a standard by Ecma (Ecma-334) and ISO (ISO/IEC 23270.2006). C# is one of the programming languages designed for the Common Language Infrastructure.

C# is a general purpose, object-oriented programming language. Its development team is led by Anders Hejisberg. The most recent version is C# 7.1, which was released in 2017 along with Visual Studio 2017 Update 3.

## Design goals

The ECMA standard lists these design goals for C#

* The language is intended to be a simple, modern, general-purpose, [object-oriented programming](https://en.wikipedia.org/wiki/Object-oriented_programming) language.
* The language, and implementations thereof, should provide support for software engineering principles such as [strong type](https://en.wikipedia.org/wiki/Strong_type) checking, array [bounds checking](https://en.wikipedia.org/wiki/Bounds_checking), detection of attempts to use [uninitialized variables](https://en.wikipedia.org/wiki/Uninitialized_variable), and automatic [garbage collection](https://en.wikipedia.org/wiki/Garbage_collection_(computer_science)). Software robustness, durability, and programmer productivity are important.
* The language is intended for use in developing [software components](https://en.wikipedia.org/wiki/Software_components) suitable for deployment in distributed environments.
* Portability is very important for source code and programmers, especially those already familiar with [C](https://en.wikipedia.org/wiki/C_(programming_language)) and [C++](https://en.wikipedia.org/wiki/C%2B%2B).
* Support for [internationalization](https://en.wikipedia.org/wiki/Internationalization_and_localization) is very important.
* C# is intended to be suitable for writing applications for both hosted and [embedded systems](https://en.wikipedia.org/wiki/Embedded_system), ranging from the very large that use sophisticated [operating systems](https://en.wikipedia.org/wiki/Operating_system), down to the very small having dedicated functions.
* Although C# applications are intended to be economical with regard to memory and [processing power](https://en.wikipedia.org/wiki/Processing_power) requirements, the language was not intended to compete directly on performance and size with C or assembly language.